IN THE CLAIMS:

The below listing of claims will replace all prior versions of claims in the referenced application. All claim amendments are made without prejudice or disclaimer.

Claims 1-10. (cancelled)

11. (Previously amended) A method of detecting a nucleic acid molecule having a chromosomal aberration, said method comprising:

providing a pair of nucleic acid probes to detect chromosomal aberrations in hematological malignancies and to analyze a sample believed to contain said nucleic acid, said pair of nucleic acid probes having comparable size, said size being selected from the group consisting of 1 to 100 kb, 1 to 10 kb, 7 to 15 kb, 10 to 20 kb, 10 to 30 kb, 20 to 40 kb, 30 to 50 kb, 40 to 60 kb, 50 to 70 kb, 60 to 80 kb, 70 to 90 kb and 80 to 100 kb, and said pair of nucleic acid probes flanking a potential breakpoint in a single chromosome, each of said pair of nucleic acid probes being labeled with at least one different reporter molecule;

hybridizing said pair of nucleic acid probes to said nucleic acid; and

detecting the presence of a split signal that arises after a break within said potential breakpoint in the case of a chromosomal aberration.

12. (Previously amended) A method of detecting cells suspected of having a chromosomal aberration, said method comprising:

providing a pair of nucleic acid probes to detect chromosomal aberrations in hematological malignancies and to analyze nucleic acid of said cells, said pair of nucleic acid probes having comparable size, said size being selected from the group consisting of 1 to 100 kb, 1 to 10 kb, 7 to 15 kb, 10 to 20 kb, 10 to 30 kb, 20 to 40 kb, 30 to 50 kb, 40 to 60 kb, 50 to 70 kb, 60 to 80 kb, 70 to 90 kb and 80 to 100 kb, and said pair of nucleic acid probes flanking a potential breakpoint in a single chromosome, each of said pair of nucleic acid probes being labeled with at least one different reporter molecule;

hybridizing said pair of nucleic acid probes to the nucleic acid of at least one of said cells; and

detecting the presence of a split signal that arises after a break within said potential breakpoint in the case of a chromosomal aberration.

Claims 13-21. (cancelled)

22. (Previously amended) A method of detecting a break within a potential breakpoint of a single chromosome, said method comprising:

associating a pair of nucleic acid probes for detection of chromosome aberrations in hematological malignancies and a sample believed to contain nucleic acid complementary to said pair of nucleic acid probes, said pair of nucleic acid probes having comparable size, said size being selected from the group consisting of 1 to 100 kb, 1 to 10 kb, 7 to 15 kb, 10 to 20 kb, 10 to 30 kb, 20 to 40 kb, 30 to 50 kb, 40 to 60 kb, 50 to 70 kb, 60 to 80 kb, 70 to 90 kb and 80 to 100 kb, each nucleic acid probe of said pair of nucleic acid probes being labeled with at least one different reporter molecule and flanking a potential breakpoint in said single chromosome;

hybridizing said pair of nucleic acid probes to said nucleic acid; and

determining whether a split-signal that arises after a break within said potential breakpoint in the case of a chromosomal aberration is present in said sample.

23. (Currently Amended) The ~~pair of nucleic acid probes of~~ method according to claim 22, which pair of nucleic acid probes hybridize to a nucleic acid molecule at a genomic distance of from about 50 kb to no more than 100 kb.

24. (Currently Amended) The ~~pair of nucleic acid probes of~~ method according to claim 22, wherein the at least one reporter molecule of said at least one different report molecule is selected from the group consisting of enzymes, chromophores, fluorochromes, and haptens.

25. (Currently Amended) The ~~pair of nucleic acid probes of~~ method according to claim 24, wherein the pair of nucleic acid probes hybridize to a single corresponding nucleic acid molecule.

26. (Currently Amended) The ~~pair of nucleic acid probes of~~ method according to claim 25, wherein the single corresponding nucleic acid molecule is at least a fragment of a chromosome.

27. (Currently Amended) The ~~pair of nucleic acid probes of~~ method according to claim 26, wherein the chromosome is not aberrant.

28. (Currently Amended) The ~~pair of nucleic acid probes of~~ method according to claim 22 which hybridize *in situ*.

29. (Currently Amended) The ~~pair of nucleic acid probes of~~ method according to claim 28, which pair of nucleic acid probes each hybridize *in situ* to only a few linear DNA